



Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

August 29, 2016

Mr. Cole Knight
McConnell Air Force Base
22 CEI/CEIER
57830 Pittsburg St., STE 120
McConnell AFB, KS 67221

RECEIVED

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AWMD/RCAP

Subject: DRAFT – SWMU No. 207 (SS544) RCRA Facility Investigation Report

Dated: March 2, 2016

McConnell Air Force Base

Dear Mr. Knight:

The Kansas Department of Health and Environment/Bureau of Environmental Remediation (KDHE) has reviewed the above referenced document. KDHE has also reviewed the EPA letter regarding the above referenced document, dated August 2, 2016. KDHE concurs with EPA's comments, and has the following comments for consideration:

1. **Section 2.2.1, Page 2-2:** The first sentence of this section states that boring locations were selected in areas where the horizontal and vertical extent of CVOCs in groundwater were not delineated to respective MCLs. This document discusses 3 "soil boring" locations (SWMU207-SB1A, -SB2A, and -SB3A), as well as 26 monitoring wells installation locations. However, out of 29 total soil boring locations, this document states there are only 20 soil borings that were evaluated for possible soil contamination. Please specify which soil boring locations were evaluated for possible soil contamination, and clarify why soil was not evaluated for possible contamination at the remaining 9 locations.
2. **Section 2.2.2, Page 2-4:** The second paragraph on this page discusses collecting water level measurements. Please consider including the field documentation associated with the collection of this information (i.e. field pages, field forms).
3. **Section 2.2.3, Page 2-4:** The second paragraph of this section states that monitoring wells were "pumped at a constant rate." This is not accurate. Based on the *Groundwater Sampling Field Sheets* in Appendix C, there were many wells at which groundwater was purged at variable rates (see Well No. SWMU207-MW30), including purge rates significantly higher than the 0.100 L/min to 0.200 L/min guideline described in *SOP No. 15 – Monitoring Well Groundwater Sampling* in the *Field Sampling Plan (Revision 4)*. There were also several wells that experienced draw down greater than the 2.0 foot maximum described in *SOP No. 15* (see Well No. SWMU207-MW37). Please comment on derivations from the SOP, and revise Section 2.2.3 as necessary.

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- 4. Section 2.2.5, Page 2-6:** It is unclear if the soil IDW generated during this RFI was characterized prior to disposal. Please provide documentation of soil characterization activities as are outlined in *SOP No. 5* in the *Field Sampling Plan (Revision 4)*.

This section indicates purged groundwater was contained in 500-barrel steel tanks, and transported to Plum Thicket Landfill. In general at McConnell, aqueous IDW is disposed of onsite. If purged groundwater was disposed of offsite, please submit documentation of aqueous waste characterization.

- 5. Section 2.3, Page 2-7:** The second to last paragraph on this page states that evaluation of historical data from 2007 through the 2014 sampling event indicates concentrations of CVOCs are stable, and that the September 2014 data is representative of site conditions during the RFI. This is the given rationale for not including the Boeing contractor's September 2014 data to support identification of CVOC plumes and their sources in and around SWMU 207. It is unclear, however, what "stable" and "representative of site conditions" might mean given there is no data to back these comments up. Please update this section to clarify these items.

Other derivations from the Work Plan not listed in this section include:

- Analysis for Total Organic Carbon in soil.
 - Work Plan – Monitoring wells: SWMU207-MW44, -46, -51
 - RFI Report – Monitoring wells: SWMU207-MW44, -46
- Geochemical Parameters in groundwater.
 - Work Plan – Monitoring Wells: MW-181, -218, -219, SWMU207-MW44, -46, -51
 - RFI Report – Monitoring Wells: MW-181, -218, -219, SWMU207-MW44, -51, -54, -55D
- Hexavalent Chrome in groundwater.
 - Work Plan – Monitoring Wells: MW-181, SWMU207-MW44, -51
 - RFI Report – Monitoring Wells: MW-181, SWMU207-MW51, -54
- Dissolved Gasses and qPCR
 - Work Plan – Monitoring Wells: MW-180, -181, SWMU207-MW46
 - RFI Report – Monitoring Wells: MW-180, -181, SWMU207-MW44S
- Compound Specific Stable Isotope Analysis (CSIA)
 - Work Plan – Monitoring Wells: MW-180, -181, -217, -218
 - RFI Report – Monitoring Wells: MW-180, -181, -217, -218, BH-02-01, BHW-037

Please discuss why these derivations from the Work Plan took place, and why monitoring wells were added or subtracted from the above analytical lists, as they were described in the Work Plan.

- 6. Section 3.2, Page 3-2:** Please consider including field documentation for the June 17, 2015 potentiometric elevations survey. (See Comment #2)
- 7. Section 3.3, Page 3-3; Appendix A:** Section 3.3 states that no indication of chemical impact was observed during the drilling of the 20 boring locations. However, there are PID detections at some of the boring locations (see SWMU207-MW49S) that may have warranted collection of a soil sample, especially given

that there were PID detections in conjunction with a soil described as “black moist to wet material.” Please clarify why no soil samples were taken in cases where PID levels were found to be above background.

Also, please clarify why in the case of clustered wells, and in the case of the three additional soil borings (SWMU207-SB1A, -SB2A, and -SB3A), PID readings are identical. It is not appropriate to duplicate PID readings on boring logs, where no PID readings were taken during the drilling of that boring.

8. **Table 3-5:** There are no notes included on this table. Please revise as necessary.
9. **Figures (General Comment):** Most of the figures included in this document are indicated as being “Preliminary.” It is unclear why the figures in this document would be preliminary. Please revise as necessary.

If you have any questions please call me at (785) 296-1682, or email me at jgrunau@kdheks.gov.

Sincerely,



Jacqueline Grunau
Environmental Scientist, Remedial Section
Bureau of Environmental Remediation

- C: Jorge Jacobs → Jacqueline Grunau → McConnell Air Force Base: SWMU 207 (C2-087-71892)
Ruby Crysler, EPA Region 7
Brian Wight, URS/AECOM (*electronic copy only*)